Instructional Technology Newsline

Volume 1, Number 11
September, 2000

Department of Elementary and Secondary Education

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In This Issue . . .

◆ Instructional Technology Update

Technology Grants Go Online

The Technology Acquisition and Enhancement (TAG) and VIDEO grants went online August 28th. Although active almost two weeks later than planned, the feedback regarding the new applications has been very positive. That's not to say we haven't encountered any glitches – because we have. Thus far (we have 4 days under our belts), the glitches have been minor and corrected in good time. The Instructional Technology staff appreciates everyone's good humor and patience as we pick up speed on this learning curve.

Also, we appreciate the good attendance at the August workshops we hosted across the state to discuss the online application process. I believe there's a significant, positive correlation between workshop attendance and applicants' success in completing the online applications.

Today, September 1, the Technology Literacy Challenge Fund application goes online. We are optimistic this process will run smoothly, given last year's TLCF and the recent TAG/VIDEO experiences. NOTE that TLCF applications must be submitted by no later than midnight, September 15 – no exceptions!

Technology Task Forces Meet

The Instructional Technology section hosted the first meeting session for the three task forces that will 1) help districts develop effective planning and implementation efforts, 2) identify technology professional development needs and activities, and 3) establish a Missouri educational technology association. The Planning team met July 20 and the PD and Association groups met on August 16. These initial meetings were very productive. Task force members are most interested in continuing the discussions via the special listserv created for each task force and have made plans to meet again in September.

2000 Census of Technology Report Out Soon

The 2000 Census of Technology Summary Report will be released in September. Preliminary data indicate that Missouri schools continue to make major strides in providing access to quality technology tools and resources. More classrooms are wired, more schools are connected, and student-to-computer ratios have declined dramatically. The 2000 COT data also indicate increased usage and improved skill levels reported on administrators, teachers, and students. Yet, much work still needs to be done, statewide, to ensure that every student and teacher have the necessary tools they need for productive teaching and learning, and improved student performance.

As in previous years, districts will be able to access abbreviated district reports online, which compares the district to its previous census data and to State averages. This year, districts will also be able to access building level reports. These data should assist districts in technology planning and evaluation efforts. Other reports and data analyses will be possible next year, when the COT is fully incorporated into the Department's core data system and data repository.

eMINTS Program Update

Staffing of the eMINTS instructional staff is nearly complete. Monica Beglau has accepted the position of Instructional Leader. Monica will work with three Area Instructional Specialists (AIS) -- Cindy Matzat, Janice Friesen, and Jennifer Kuehnle -- and 13 Cluster Instructional Specialists (CIS). The CIS are educational support specialists who are hired by the project to assist eMINTS teachers with the implementation of project activities. They assist teachers with pedagogical change toward student centered, higher order, collaborative instructional activities. They participate in and/or provide all training, make periodic visits to classrooms, offer personal assistance, help locate resources, and provide other support / assistance as needed.

Monica and her instructional staff met in Columbia on August 21 for one week's training. The AIS and CIS are eager for all the schools to begin, so they can begin meeting with the teachers.

Visit the eMINTS website at http://emints.more.net/ for information about the program, including a map of current participants, a listing of the clusters and areas, and names of the CIS.

E-Rate Update

The Schools and Libraries Division (SLD) of the Universal Service Administrative Company will issue today its 20th wave of funding commitment decision letters for Year 3, bringing the total to-date to over $1.54 billion in more than 24,600 letters. Wave 20 continues to fund internal connections requests to applicants qualifying for a discount rate of 83% and above. SLD still expects to issue several more waves in the weeks ahead. For details on funding commitments made thus far for Year 3, visit www.sl.universalservice.org/funding/y3/default.asp.

Note that MOREnet will send three representatives to the national E-rate Train the Trainers Workshop in Washington DC on October 3-4, 2000. This will enable MOREnet staff to provide the necessary information to schools and libraries in future workshops and outreach sessions.

Program Reporting Change for MOREnet

Growth, success, change. These words are three of the most frequently used words people use to describe MOREnet. For the next few sentences they are also going to be used to describe K-12 efforts at MOREnet. Growth, continues to be the one word description of everything that is happening within MOREnet. Growth is not limited to K-12 programs. MOREnet is a growth organization as evidenced by our recent acquisition of space in the Zimmer Building across the street. There is also growth related to K-12. The last count has 510, or 97% of the school districts in Missouri participating in the MOREnet program. The information gathered during the last Computer Census, early spring 2000, found that 82% of the 59,261 classrooms in Missouri have been wired for Internet connectivity.

MOREnet has been successful because we have worked very hard to be the "value add" to our customer's participation in our various programs. Each individual working at MOREnet contributes in their own way to the success experienced by the programs at MOREnet.

With MOREnet's growth and success comes change. Starting September 1 there will be a restructuring of MOREnet's program responsibilities. On this date Eric Nicklas will have even greater responsibility for the day-to-day operations of the K-12 Technology Network Program. Along with this greater responsibility Eric will be reporting to Tony Wening. This change will help ensure continued program success and continuity as well as provide a great deal of synergy in managing our various projects, the consortium, and the affiliates. This change frees Bill Giddings to concentrate his efforts on E-MINTS and integration of technology into the classroom and curriculum. With this reporting change Tony will then have operational supervision of REAL, MERC, State Agencies, Missouri Express, and DESE TNP programs here at MOREnet.

Bill will continue his leadership role with K-12 efforts and his close involvement with the MINTs and eMINTS projects. At the same time, Bill will continue his work with DESE to set the overall Vision, Strategy and Direction for all of MOREnet's K-12 programs. Eric will assume the role of liaison between MOREnet and DESE.

Educational Technology Conference Registration Available Online

Online registration is now open for Missouri's 2000 Educational Technology Conference: Connecting Technology to Curriculum, to be held October 8-10 at Tan-Tar-A. Register early and online to get your first choices of the breakout sessions, at http://www.more.net/register/. If you have any questions, please contact Sandra Monnig at sandra@more.net or call 1-800-509-6673.

Newsline Anniversary Coming Soon

Next month's issue of *Newsline* will complete its first year of publication. In October, we will ask for your feedback. Be thinking about what you would like for us to continue doing, what we could be doing better, what new topics we should cover. We want to make sure that next year's volume meets your needs and interests.

◆ Technology Planning Tip of the Month

- Submitted by David Hollingshead, Gideon School District

Analyze Data to Make Recommendations

Your technology committee is in place. You have established a vision and mission for technology use within your district. You have conducted surveys and gathered data. The next task is to analyze that data to make recommendations.

The major purpose of analyzing the data is to determine the gap between where you are and where you want to be. Your technology mission statement and the vision you have developed for technology use within your district should drive this analysis. With technology planning, you must always keep your ultimate goal in mind. Everything you do should be directed toward that target.

Basically, your data analysis should revolve around three distinct areas. Those three areas are hardware and software issues, instructional issues, and inservice issues. In each of these three areas you are looking for the gap between "what is" and "what should be." When you have identified that gap you will have a handle on the need. Then you are in a position to develop recommendations that will address those needs and help accomplish your technology mission.

Hardware and Software Issues

An accurate and complete inventory of all technology and software should be the basis of this aspect of your data analysis. You need to make sure you go beyond computers and consider all forms of technology within the district. Your analysis should address data, video, and voice. The integration of these three aspects is becoming more common in today's world and definitely needs to be considered in any technology plan.

This portion of the analysis is relatively straightforward. You simply need to determine the quantity and quality of technology and software that is available. You need to have established some minimum standards for each type of technology. The minimum standards should be driven by your technology mission.

This aspect entails looking at hard numbers. Much of this data was gathered for your Technology Census and this can be a starting point. Just knowing that you have a four to one student to computer ratio doesn't tell you much. But knowing how many computers meet your minimum standards can provide a basis for building your recommendations and designing upgrade plans. Ideally, you should have your inventory in a database of some sort so you can manipulate it and determine exactly what kind and what quantity of technology is available.

Furthermore, the hardware analysis should consider network infrastructure. It needs to look at servers, server capacity, trends in hard disk usage, trends in bandwith usage, network structure, hubs, and switches. As you expand your desktop technology resources you must insure that your infrastructure is capable of handling it. Your data analysis should identify where you currently are and what you need to get where you are going. The gap between those two points then becomes the basis for your recommendations.

An analysis of available software is also important. You may have an extensive library of software, but if it is simply drill and practice software it may not move you toward the accomplishment of your technology mission. Data analysis should provide a clear picture of what

categories of software are currently available in your district, and to what extent that software is appropriate for where you want to go. Once again, you are looking for any gap between where you are and where you want to be.

Instructional Issues

Instructional issues deal with how technology is currently being utilized in the classroom. This data often comes from surveys of teachers and students. The analysis should center around determining two things. First, you need to know how technology is currently being used to impact instruction. Data analysis should try to determine the type of uses of technology. This should include looking at the whole spectrum from more advanced uses focusing on inquiry based learning all the way down to the more simple forms of drill and practice uses. We already know that some uses of technology are more effective than others. Our technology plans need to move us toward the more effective uses of technology for instruction. In addition, we need to know how often technology is used for instruction. The type of instructional technology needed will ultimately be determined by the intended usage.

Second, you need to know what kinds of additional technology teachers want. This will most likely involve an analysis of narrative data and interviews where teachers have indicated how they would like to use technology. It could also come from a "pick-list" on a survey but this would have already limited their choices and may not provide complete data. If a teacher has a vision for the use of a particular type of technology, then it is important to try to develop recommendations that will provide the requested technology. Conversely, there is no need to place advanced technology in a teacher's classroom unless there is some indication that it will be utilized. This portion of the analysis will also help identify the types of software that should be considered.

Inservice Issues

This may be one of the most difficult areas of data analysis, because sometimes we may not know what it is that we need to know. Undoubtedly, the data you have collected will give some indication of what type of technology inservice the teachers desire. Your data may even include a listing of requested inservice topics, or your professional development chair may have that data. But as you look for the gap between "what is" and "what should be" you have to look beyond the surface. You have to determine what the current level of technology expertise might be, and then you have to go beyond the requested inservice and determine what types of training are necessary to ensure that teachers can appropriately integrate technology into their curriculum.
This is probably the most critical and yet most misunderstood aspect of the data analysis process. It is easy to look at numbers and determine we need so many more computers, or that we want to add LCD projectors and smart boards, or that we need to enhance our network. It is not as easy to determine what the data says about inservice needs.

Some Words of Caution

Throughout the data analysis process there are a few pitfalls we need to be careful to avoid. First, don’t use data analysis to support preconceived notions. Don't start with a technology plan in mind and then insure that your data analysis supports it. Too often we can "think" we know where we need to go and make the data analysis support that concept. Let the data analysis speak for itself and then develop the plan to address the gap that was identified.

Second, don't let your technology plan become a "single issue" plan. Too often we write a plan for a specific purpose. Our instructional technology plans need to address the broad scope of technology and technology use. Don't just analyze data for one purpose.

Third, an instructional technology plan must be a living document. It cannot be static. Technology is changing too rapidly for a document to be inflexible. Remember that data analysis must be ongoing. You cannot simply analyze the data once and then wait three years till you develop your next technology plan.

An effective instructional technology plan is dependent upon the quality of the data we collect, how we analyze that data, and the resulting recommendations that come from that analysis. The three distinct areas mentioned above are not the only way of looking at data analysis, and it is not the most technical method of looking at data analysis. But it will work. It will provide a good basis for developing your recommendations and moving forward with the development of your instructional technology plan.

◆ Copyright Question of the Month

Q: May an educator (e.g., administrator, classroom teacher, substitute teacher, or student teacher) other district employee, volunteer, or others read a trade book or textbook to create a cassette tape for a student with a learning disability other than visual impairment?

A: No. A derivative work would be created by changing the format from print to audio. Derivative works are controlled by the copyright owner.

Since many books on tape are available for purchase, the copyright owner is possibly being denied profit.

Note: Permission to create a derivative work (print to audio) **must** be requested from the copyright owner. The Individual Education Plan (IEP) does not supersede the Copyright Law.

◆ Grant Winners Share their Secrets

The Instructional Technology Supervisors recently asked the 2000 Competitive Grant winners, who were "repeat recipients," to share their successful grant writing secrets. We will feature their comments in *Newsline* in the next several months. This month:

Pam Hedger, Curriculum Director, Butler R-V School District, believes the first step is to identify an area where kids' learning could be improved. If technology could provide a solution for this area of weakness, you have a starting point for a grant application. If you are thinking, "We need more computers or some Smart Boards," and not thinking of the specific way they will be used to improve teaching and learning, don't even bother.

Always attend the DESE workshop and take good notes. Then go home and read the manual several times. Read the application guidelines and the scoring guide. After you have written your grant, read the application guidelines and scoring guide again, checking to be sure that you have addressed every item that will be scored. If you are not sure that your readers will notice something that you feel is important, give it a heading that will make it more noticeable.

Jackie Schoenberg, Elementary Computer Teacher, Bowling Green R-1 School District, shares her success tip: "To make sure my grant is clear, concise, and easy to read I ask someone in the district, who does not know anything about the grant and has an English background, to proofread it and make comments."

Connie Crane, Administrative Assistant, Troy R-III School District, offers five tips:

- Follow evaluation criteria to the letter
- Be clear, concise, and consistent
- Find something to improve in your building through technology
- Be student-centered
- Write measurable objectives

Dennis Jarrell, Technology Coordinator, Dexter R-XI School District, believes his district's best grants have come from developing a good educational idea by working closely with a group of interested teachers (usually 4-5) and their building principal. Start early (December) and assign tasks to each group member, such as gathering data to justify need, developing a history of what we have done on our own, fine tuning the goals and objectives of our idea, etc. Involving this many people has some disadvantages. It is time-consuming to keep everyone updated and scheduling time to work is more difficult if more people are involved. "Many times the direction of the project will shift distinctly from my original purpose, so there is some loss of control. However, I feel strongly that every grant we have produced this way has been superior to those I have worked on independently, and any shift in focus has always resulted in a better educational idea. This process seems to work well for us."

◆ Learning With Technology

- Featuring Odessa R-VII and King City R-I

Odessa R-VII

At-Risk high school students in Odessa R-VII school district are participating in a new, technology rich curriculum that promotes experiential learning strategies. The Applied Academics curriculum units provide hands-on learning modules that involve the at-risk student in a rigorous academic experience rather than go-nowhere, "general track" courses. Before all these good things happen for students, however, teachers had to learn new ways of teaching and curriculums had to be replaced. Applied Academics provides a weeklong training session for teachers. Carl Brantley, project manager, indicated this was one of the more difficult parts of the project. Because of teacher turnover, some teachers were in the classroom before they were able to take the training. However, Brantley notes the curriculum and modules were so well designed that the lack of training did not compromise the teacher's ability to deliver the subject matter. Brantley notes that Odessa is now offering challenging coursework to ALL students, and has sharpened the skills of the once *Forgotten Student.* For more information, contact Carl Brantley at 816/230-5316.

King City R-I

A new multimedia center, hours of teacher training and a partner school in Wisconsin have helped the students and teachers of King City R-I become *Multimedia Millennium Messengers.* Teachers have received training on new software programs, and have become proficient with new technologies like digital cameras and scanners. Teachers in King City have collaborated with teachers from the Holmen School district in Wisconsin to provide students with shared learning projects such as ecology day activities and Math Baseball. Because of the increase in professional development in the elementary school, the high school faculty requested and received training as well. Cindy Boone, project coordinator, cites the "excitement" as one of the major pluses of the project. "Everyone participates, and the district web site is now a district-wide project. It's really a team effort." Some teachers have included parent information on their class web pages, and use them as another way to communicate with the community. To see what the King City Millennium

Messengers have to say, check out their web site at www.kingcity.k12.mo.us

◆ Assistive Technology Options in the Mathematics Curriculum

- Submitted by Fred Pellerito, Technology Specialist, Missouri Technology Center for Special Education

Most people, when asked about assistive technology, will refer to computers, voice output communication devices, and other high-tech, high-cost specialized pieces of equipment. The legal definition of an "assistive technology device" is any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. Keeping this definition in mind, what qualifies as assistive technology in mathematics, and how can any assistive technology help students with special needs achieve some degree of success in the classroom?

Many educators have been using assistive technology throughout their careers but just didn't realize that the materials they were already using could be deemed assistive technology. The large manipulatives they used for introducing concrete counting materials could also assist the student with physical or motor involvement. Using the pencil grips to aid students in forming numerals could also assist the student who might not otherwise have the ability to hold a pencil. The calculator used with the entire class also empowers the student with a cognitive disability to complete assigned tasks. In addition, many educators have adapted existing materials, with minimal effort, to accommodate students with special needs. Enlarging mathematics worksheets on the copy machine or reading math equations into a tape recorder could allow the student with low vision or blindness access to the mathematics lessons taught to the entire class. These are just a few examples how to incorporate simple, low-tech solutions into the classroom.

Let's take a look at other assistive technology options available to assist students with special needs in performing mathematics tasks.

There are a variety of calculators available locally which perform a number of functions that historically were performed using mental computation, on paper using specific formulas, or using textbook tables to look up the answer. The local electronics store offers calculators that perform measurement computations and conversions rapidly for the student with a learning disability who is struggling to keep up with the rest of the class. Inexpensive large key calculators as well as talking calculators aid the student with low-vision. There are on-screen calculators for the computer which scan the numbers enabling the student with physical disabilities, using only the mouse or a switch, access to equating mathematics problems. Using voice-recognition software, it is now possible to access the calculator that already comes with your operating system and solve mathematics problems by just speaking into a microphone.

There are many new computer software titles on the market today that go beyond the typical drill and practice routine. Many of these programs were not targeted specifically for the special education population although they can be used to supplement the classroom activities. There are software programs, with specialized access modes, for the manipulation of objects for students without the ability to physically count and manipulate the actual objects. Several software programs provide cues and display number borrowing and carrying just as would be done on paper. There are algebra and geometry programs specifically designed for students with learning disabilities that guide the student through these areas in a logical solving sequence at the students' individual level.

There are many other assistive technology options available, including students with special needs, in the existing mathematics curriculum. Please call or write the Missouri Technology Center for more detailed information on this or other curriculum topics or visit our website for additional resources.

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◆ Web-based Education Commission

The Web-based Education Commission was created by Congress last year and charged with developing specific proposals to ensure that all learners can take full advantage of the web. Commission members plan to release a final report this fall that will highlight the issues of access and equality, cost and affordability, and ensuring rigorous standards. For more information, visit the Commission at www.webcommission.org

◆ Graduate credit correspondence course offered by SuccessLink through NWMSU at Maryville MO

Course title: Instructional Technology Teaching Ideas
Course number 61-550-81 *Instructor : Marsha Baclesse*

Three-hour correspondence course designed to increase teacher and student use of technology within the curriculum. Teachers share lessons integrating technology into daily instruction.

Teachers submit performance-based teaching activities that are graded, posted, and shared freely on the SuccessLink Internet Web site. The lessons/units must contain basic lesson design components, scoring guides, Show Me Standards, a writing activity, and choices of other components in the syllabus. Teachers choose subject/grade level.

Request a graduate credit packet from SuccessLink

The cost is $55 per credit hour

Toll free: 888-636-4395 Jefferson City, MO

For information packet, e-mail: marshab@socket.net

◆ Mark Your Calendar

September	
Aug. 28–Oct. 31	Window for Submitting Technology Acquisition and Enhancement and VIDEO Grants
1	Publish Newsline on the web

1-15	Window for Submitting TLCF Grants
6	First ½ Payment (State Technology and VIDEO Grants)
18	Technology Planning Task Force Meeting 10:00 – 1:00, MOREnet, Columbia, MO
21	Technology Association Task Force Meeting 10:00 – 1:00, MOREnet, Columbia, MO
22	Professional Development Task Force Meeting 10:00 – 1:00, Practical Parenting Partnership Center, Jefferson City, MO
28	TLCF Reader Training, MOREnet, Columbia, MO

October

2	Publish Newsline on the web
3	Techies Day
4	First ½ Payment (State Technology and VIDEO Grants)
1-15	Window for submitting TLCF Final Expenditure Report and Program Evaluation Narrative
8-10	Educational Technology Conference Tan-Tar-A, Osage Beach, MO
8	VIDEO Advisory Committee Meeting Tan-Tar-A, Osage Beach, MO

◆ Upcoming 2000 Conferences

September 14-15	Grants & Funding For School Technology Philadelphia, PA gfinfo@eschoolnews.org; www.eschoolnews.org/gf
October 2-4	Blueprints, Tools, and Practices for the 21st Century School Leader eSchool Technology Conference & Exposition Hyatt Hotel, Orlando, FL www.eschoolnews.org/estc/
October 8-10	Missouri Educational Technology Conference: Connecting Technology to Curriculum Tan-Tar-A Resort, Osage Beach, MO http://www.more.net/events/metc2000/
October 15-17	Get Connected: ASCD/ITEC Conference Des Moines, IA www.itec-ia.org

October 17-20	School Technology Management 2000 Conference and Exposition Omni Shoreham Hotel, Washington, DC www.eschoolnews.org/events/stm2k
October 20-22	Students as Technology Leaders National Conference Boston, MA http://projects.terc.edu/satl
October 25-28	National School Boards Association 14th Annual Technology + Technology and Learning Conference Denver, CO www.nsba.org/T+L
October 30-31	The 1st Annual Superintendents' Technology Summit Palm Springs, CA www.eschoolnews.org/sts
Oct 30 – Nov 4	WebNet 2000 5th Annual World Conference on the WWW and Internet San Antonio, TX www.aace.org
November 2-5	NMSA Annual Conference & Exhibit St. Louis, MO http://www.nmsa.org/
November 9-10	MNEA Fall Conference Kansas City, MO www.mo.nea.org
January 11-13	21st Annual Florida Educational Technology Conference Orlando, FL www.fetc.org
January 25-27	TRLD 2001 19th Annual International Conference on Technology, Reading & Learning Difficulties San Francisco, CA www.trld.com
February 20-23	6th Annual CoSN Conference: K-12 School Networking: Web of Change Washington, DC www.cosn.org/conferences
March 5 – 10	SITE 2001, Society for Information Technology & Teacher Education Holiday Inn International Drive Resort, Orlando, FL www.aace.org/conf/site

◆ Internet Sites of Interest

Mention in Newsline does not necessarily constitute an endorsement by DESE.

AskERIC Hot Topics: Teaching the Olympics is a collection of resources for teaching about the 2000 Olympics. It includes links to Web sites, lesson plans, and additional information: http://ericir.syr.edu/Qa/hottopics/olympics.html

Sydney 2000: The official site of the Sydney 2000 Olympic Games: www.olympics.com/eng

Olympic Collecting includes information and history about collecting Olympic memorabilia such as stamps, pins, coins, and mascots: www.collectors.olympic.org

Sydney 2000: Olympic Education and Academic Activities: http://ericir.syr.edu/Projects/Newton/9/olymtrn.html

The 1999 CIA World Factbook is useful for country maps, statistics, and general information: www.odci.gov/cia/publications/factbook/index.html

Teacher Created Materials (TCM) has many Olympic-related materials: bulletin board, stickers, notepads, nametags, puzzle books, etc. Also, visit their Teacher Forum section for lesson plan ideas: www.teachercreated.com

◆ From the Mailbag

Community Grants Program www.bigchalk.com

A K-12 education Web site is forming a new foundation to help schools use technology to improve student learning and bridge the digital divide. An initial activity of the foundation will be to establish a Community Building Grants program. Grants of up to $1000 a year will be given to schools to increase interaction within their local communities using Internet technology.

The foundation plans to make up to two grants per state. Sixty percent of the grants will be awarded to needy schools, with special emphasis on schools within federally defined empowerment zones.

The bigchalk foundation will accept online applications for Community Building Grants between October and December of this year. Educators can receive information by writing to grants@bigchalk.com.